

Title (en)
GRANULAR THIN MAGNETIC FILM AND METHOD OF MANUFACTURING THE FILM, LAMINATED MAGNETIC FILM, MAGNETIC PART, AND ELECTRONIC DEVICE

Title (de)
"GRANULARER DÜNNER MAGNETFILM UND VERFAHREN ZUR HERSTELLUNG DES FILMS, LAMINierter MAGNETFILM, MAGNETISCHES TEIL UND ELEKTRONISCHES BAUELEMENT"

Title (fr)
FILM MAGNETIQUE FIN GRANULAIRE ET PROCEDE DE REALISATION DU FILM, FILM MAGNETIQUE LAMINE, PIECE MAGNETIQUE ET DISPOSITIF ELECTRONIQUE

Publication
EP 1361586 A1 20031112 (EN)

Application
EP 02715778 A 20020117

Priority
• JP 0200278 W 20020117
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Abstract (en)
There are provided a magnetic thin film utilizing a granular film and having excellent high frequency characteristics and a method of manufacturing the same, and a multilayered magnetic film and magnetic components and electronic equipment utilizing the same. <??>A nonreactive sputtering is performed so that there is no oxidation of a magnetic metal, and a saturation magnetization is increased to increase a resonant frequency of permeability. Also, a multi-target simultaneous sputtering is combined with the nonreactive sputtering so that in a granular structure including magnetic grains and an insulating layer a size of the magnetic grains and a thickness of the insulating layer are optimized thereby ensuring a proper magnitude for a crystalline magnetic anisotropy within the grains and excellent soft magnetic properties. Further, the optimization of the thickness of the insulating layer has the effect of improving a resistivity, decreasing an eddy current and improving an exchange interaction between the magnetic grains. <IMAGE>

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IPC 8 full level
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